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January 7, 2022

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Mr. Bernard Logan, Clerk
c/o Document Control Center
State Corporation Commission
P.O. Box 2118
Richmond, Virginia 23218

RE: ***Application of Kentucky Utilities Company d/b/a Old Dominion Power Company, For an adjustment of electric base rates***
Case No. PUR-2021-00171

Dear Mr. Logan:

Please find attached for filing, in the above-referenced matter, the testimony and schedules of Mr. Glenn A. Watkins on behalf of the Office of the Attorney General, Division of Consumer Counsel.

Thank you for your assistance in this matter.

Yours truly,

/s/ John E. Farmer, Jr.

John E. Farmer, Jr.
Assistant Attorney General

cc: Service List

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing was served on January 7, 2022, by electronic mail, to:

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COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

APPLICATION OF

KENTUCKY UTILITIES COMPANY	)	
d/b/a OLD DOMINION POWER COMPANY	)	**CASE NO. PUR-2021-00171**
	)	
For an adjustment of electric base rates	)	

DIRECT TESTIMONY OF

GLENN A. WATKINS

ON BEHALF OF

THE OFFICE OF THE ATTORNEY GENERAL

DIVISION OF CONSUMER COUNSEL

JANUARY 7, 2021

KENTUCKY UTILITIES COMPANY
d/b/a OLD DOMINION POWER COMPANY
CASE NO. PUR-2021-00171

Summary of the Direct Testimony of Glenn A. Watkins

The Company proposes to increase the Residential Basic Service Charge ("customer charge") from $12.00 per month to $15.00 per month.

Mr. Watkins' analyses indicate that, purely on a cost basis, a Residential customer charge of no more than $5.38 per month is supported. However, considering the Commission has approved the current rate of $12.00, Mr. Watkins recommends maintaining the current Residential customer charge of $12.00 per month.

KENTUCKY UTILITIES COMPANY
d/b/a OLD DOMINION POWER COMPANY
CASE NO. PUR-2021-00171

DIRECT TESTIMONY OF
GLENN A. WATKINS

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Glenn A. Watkins. My business address is 6377 Mattawan Trail, Mechanicsville, Virginia, 23116.

Q. WHAT IS YOUR PROFESSIONAL AND EDUCATIONAL BACKGROUND?

A. I am President and Senior Economist with Technical Associates, Inc. ("TAI"), which is an economics and financial consulting firm with offices in the Richmond, Virginia area. Except for a six-month period during 1987 in which I was employed by Old Dominion Electric Cooperative, as its forecasting and rate economist, I have been employed by Technical Associates continuously since 1980.

During my career at TAI, I have conducted marginal and embedded cost of service, rate design, cost of capital, revenue requirement, and load forecasting studies involving numerous electric, gas, water/wastewater, and telephone utilities. I have provided expert testimony on more than 250 occasions in Alabama, Arizona, Delaware, Georgia, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Montana, New Jersey, Nevada, North Carolina, Ohio, Pennsylvania, South Carolina, Vermont, Virginia, Washington, and West Virginia.

I hold an M.B.A. and a B.S. in economics from Virginia Commonwealth University and am a Certified Rate of Return Analyst. A more complete description of my education and experience is provided in my Schedule GAW-1.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

A. Over the last 30-plus years, I have testified before this Commission on dozens of occasions concerning virtually all aspects of public utility ratemaking.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. TAI has been engaged by the Office of the Attorney General, Division of Consumer Counsel ("OAG" or "Consumer Counsel") to evaluate Kentucky Utilities Company d/b/a Old Dominion Power Company's ("KU" or "Company") Residential Basic Service Charge ("customer charge"). The purpose of my testimony is to present the findings of my investigation and offer recommendations to the Commission in this area.

Q. PLEASE DESCRIBE KU'S CURRENT AND PROPOSED RESIDENTIAL CUSTOMER CHARGE.

A. The Company's current Residential customer charge is $12.00 per month. Company witness Robert Conroy proposes to increase this fixed charge by 25% to $15.00 per month.

II. <u>KU'S RATIONALE FOR HIGHER CUSTOMER CHARGES</u>

Q. DOES MR. CONROY PROVIDE ANY CONCEPTUAL RATIONALE FOR HIS PROPOSED INCREASE TO THE RESIDENTIAL FIXED MONTHLY CUSTOMER CHARGE?

A. Yes. On pages 11 through 14 of his direct testimony, Mr. Conroy asserts that his proposed increase to this fixed charge will:

(a) help reduce intra-class subsidies between large volume and small volume Residential customers;

(b) send better price signals to customers based on costs;

(c) assist in providing customer incentives to engage in energy efficiency; and,

(d) help stabilize customers' monthly bills.

Q. ARE MR. CONROY'S CONCEPTUAL ASSERTIONS BASED ON ANY OVERARCHING THEORY HE HAS CONCERNING PROPER RATE DESIGN?

A. Yes. By and large, Mr. Conroy asserts that fixed costs should be recovered through fixed charges. Because the vast majority of KU's sunk or short-run distribution-related costs are fixed in nature, he claims that a substantial amount of the Company's distribution-related revenues should be collected through fixed charges. As examples, Mr. Conroy asserts:

- Customers that use less energy than the average customer (within a given class) are paying less than their fair share of fixed-costs and margins.[1]

- Under the Company's proposed increase to the fixed Residential customer charge, a portion of "customer-specific fixed costs" will remain in energy rates thereby promoting energy conservation since the variable energy rates will then be higher than the calculated cost of service-based variable energy rates.[2]

- The Residential "non-customer-specific" fixed costs the Company recovers from most other rate classes through demand charges will remain embedded in variable energy charges for the Residential class.[3]

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[1] Conroy direct, page 12, lines 17-23.
[2] Conroy direct, page 13, lines 3-14.
[3] Conroy direct, page 13, lines 14-16.

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Q. DO YOU AGREE WITH MR. CONROY'S ASSERTIONS THAT FIXED COSTS SHOULD BE RECOVERED THROUGH FIXED CHARGES?

A. No. I strongly disagree with Mr. Conroy's understanding of economic price theory and how efficient pricing prevails in competitive markets. This is most important, as it is often said that regulation should serve as a surrogate to competition to the largest extent possible.

Q. PLEASE EXPLAIN.

A. The most basic tenet of competition is that prices determined through a competitive market ensure the most efficient allocation of society's resources. Because public utilities are generally afforded monopoly status under the belief that resources are better utilized without duplicating the fixed facilities required to serve consumers, a fundamental goal of regulatory policy is that regulation should serve as a surrogate for competition to the greatest extent practical.[4] As such, the pricing policy for a regulated public utility should mirror those of competitive firms to the greatest extent practical.

Under economic theory, efficient price signals result when prices are equal to marginal costs.[5] It is well known that all costs are variable in the long run. Therefore, efficient pricing results from the incremental variability of costs even though a firm's short-run cost structure may include a high level of sunk or "fixed" costs or be reflective of excess capacity. Indeed, competitive market-based prices are generally structured based on usage; i.e. volume-based pricing. For example, an oil refinery costs well over a billion dollars to build such that its cost structure is largely comprised of sunk, or fixed, costs, but

[4] James C. Bonbright, et al., *Principles of Public Utility Rates*, p. 141 (Second Edition, 1988).
[5] Strictly speaking, efficiency is achieved only when there is no excess capacity such that short-run marginal costs equal long-run marginal costs. In practice, there is usually at least some excess capacity present such that pricing based on long-run marginal costs represents the most efficient utilization of resources.

these costs are recovered from customers one gallon at a time.

Q. PLEASE BRIEFLY EXPLAIN THE ECONOMIC PRINCIPLES OF EFFICIENT PRICE THEORY AND HOW SHORT-RUN FIXED COSTS ARE RECOVERED UNDER SUCH EFFICIENT PRICING.

A. Perhaps the best known micro-economic principle is that in competitive markets (i.e., markets in which no monopoly power or excessive profits exist), prices are equal to marginal cost. Marginal cost is equal to the incremental change in cost resulting from an incremental change in output. A full discussion of the calculus involved in determining marginal costs is not necessary here. However, it is readily apparent that because marginal costs measure the changes in costs with output, short-run "fixed" costs are irrelevant in efficient pricing. This is not to say that efficient pricing does not allow for the recovery of short-run fixed costs. Rather, they are reflected within a firm's production function such that no excess capacity exists and that an increase in output will require an increase in costs -- including those considered "fixed" from an accounting perspective. As such, under efficient pricing principles, marginal costs capture the variability of costs, and prices are variable because prices equal these costs.

Q. PLEASE EXPLAIN HOW EFFICIENT PRICING PRINCIPLES ARE APPLIED TO THE RETAIL ELECTRIC UTILITY INDUSTRY.

A. Universally, utility marginal cost studies include three separate categories of marginal costs: demand; energy; and customer. Consistent with the general concept of marginal costs, each of these costs varies with incremental changes. Marginal demand costs measure the incremental change in costs resulting from an incremental change in peak load (demand). Marginal energy (commodity) costs measure the incremental change in costs resulting from an incremental change in kWh (energy) consumption. Marginal customer costs measure the incremental change in costs resulting from an incremental change in number of customers.

Particularly relevant here is understanding what costs are included within, and the procedures used to determine, marginal customer costs. Since marginal customer costs reflect the measurement of how costs vary with the number of customers, they only include those costs that directly vary as a result of adding a new customer and maintaining that new customer's account.

Q. PLEASE EXPLAIN HOW THIS THEORY OF COMPETITIVE PRICING SHOULD BE APPLIED TO REGULATED PUBLIC UTILITIES SUCH AS KU.

A. Due to KU's investment in its distribution system infrastructure, there is no debate that many of its short-run costs are fixed in nature. However, as discussed above, efficient competitive prices are established based on long-run costs, which are entirely variable in nature.

Marginal cost pricing only relates to efficiency. This pricing does not attempt to address fairness or equity. Fair and equitable pricing of a regulated monopoly's products and services should reflect the benefits received for the goods or services. In this regard, those that receive more benefits should pay more in total than those who receive fewer benefits. Regarding electricity usage, the level of consumption is the best and most direct indicator of benefits received. Thus, volumetric pricing promotes the fairest pricing mechanism to customers and to the utility.

The above philosophy has consistently been the belief of economists, regulators, and policy makers for generations. For example, consider utility industry pricing in the 1800s, when the industry was in its infancy. Customers paid a fixed monthly fee and consumed as much of the utility commodity/service as they desired (usually water). It soon became apparent that this fixed monthly fee rate schedule was inefficient and unfair. Utilities soon began metering their commodity/service and charging only for the amount actually consumed. In this way, consumers receiving more benefits from the utility paid more, in total, for the utility service because they used more of the commodity.

Q. IS THE RETAIL ELECTRIC UTILITY INDUSTRY UNIQUE IN ITS COST STRUCTURES, WHICH ARE COMPRISED LARGELY OF FIXED COSTS IN THE SHORT-RUN?

A. No. Most manufacturing and transportation industries are comprised of cost structures predominated with "fixed" costs. These fixed costs, also called "sunk" costs, are primarily comprised of investments in plant and equipment. Indeed, virtually every capital-intensive industry is faced with a high percentage of so-called fixed costs in the short run. Prices for competitive products and services in these capital-intensive industries are invariably established on a volumetric basis, including those that were once regulated, e.g., motor transportation, airline travel, and rail service.

Accordingly, KU's position that its fixed costs should be recovered through fixed monthly charges is incorrect. Pricing should reflect the Company's long-run costs, wherein all costs are variable or volumetric in nature, and users requiring more of KU's products and services should pay more than customers who use less of these products and services. Stated more simply, those customers who conserve or are otherwise more energy efficient, or those who use less electricity for any reason, should pay less than those who use more electricity.

Q. HOW ARE HIGH FIXED CUSTOMER CHARGE RATE STRUCTURES CONTRARY TO EFFECTIVE CONSERVATION EFFORTS?

A. High fixed charge rate structures actually promote additional consumption because a consumer's price of incremental consumption is less than what an efficient price structure would otherwise be. A clear example of this principle is exhibited in the natural gas transmission pipeline industry. As discussed in its well-known Order 636,[6] FERC's adoption of a "Straight Fixed Variable" ("SFV") pricing method[7] was a result of national policy (primarily that of Congress) to encourage increased use of domestic natural gas by promoting additional interruptible (and incremental firm) gas usage. FERC's SFV pricing mechanism greatly reduced the price of incremental (additional) natural gas consumption. This resulted in significantly increasing the demand for, and use of, natural gas in the United States after Order 636 was issued in 1992.

FERC Order 636 had two primary goals. The first goal was to enhance gas competition at the wellhead by completely unbundling the merchant and transportation

[6] Pipeline Service Obligations and Revisions to Regulations Governing Self Implementing Transportation; and Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol, Order No. 636, 57 Fed. Reg. 13,267 (April 16, 1992) ("Order 636").

[7] Under SFV pricing, customers pay a fixed charge that is designed to recover all of the utility's fixed costs.

functions of pipelines.[8] The second goal was to encourage the increased consumption of natural gas in the United States. In Order 636's introductory statement, FERC stated:

> The Commission's intent is to further "facilitat[e] the unimpeded operation of market forces to stimulate the production of natural gas... [and thereby] contribute to reducing our Nation's dependence upon imported oil...."[9]

With specific regard to the SFV rate design adopted in Order 636, FERC stated:

> Moreover, the Commission's adoption of SFV should maximize pipeline throughput over time by allowing gas to compete with alternate fuels on a timely basis as the prices of alternate fuels change. The Commission believes it is beyond doubt that it is in the national interest to promote the use of clean and abundant gas over alternate fuels such as foreign oil. SFV is the best method for doing that.[10]

Indeed, FERC's objective to increase natural gas consumption through the use of SFV rate design was the genesis of utilities beginning to argue the misguided notion that fixed costs should somehow be recovered from fixed charges. That is, such assertions or claims were never made by utility rate design analysts until FERC Order 636 and the implementation of SFV rate design. As a result of this misunderstanding of economics and public policy, some public utilities have argued for SFV residential pricing (or increased reliance on fixed charges), claiming a need for enhanced fixed charge revenues. To support their claim, utilities have argued that because retail rates have been historically volumetric-based, there has been a disincentive for utilities to promote conservation or encourage reduced consumption. However, FERC's objective in adopting SFV pricing suggests the exact opposite. The price signal that results from SFV pricing is meant to promote

[8] Order No. 636, 57 Fed. Reg. 13,267 at 13,269.

[9] *Id.* (quoting S. Rep. No. 39, 101st Cong., 1st Sess., at p. 2).
[10] *Id.* at 13,294 (internal citations omitted).

additional consumption, not reduce consumption. Thus, a rate structure that is heavily based on a fixed monthly customer charge sends an even stronger price signal to consumers to use more energy.

Q. AS A PUBLIC POLICY MATTER, WHAT IS THE MOST EFFECTIVE TOOL THAT REGULATORS HAVE TO PROMOTE COST EFFECTIVE CONSERVATION AND THE EFFICIENT UTILIZATION OF RESOURCES?

A. Unquestionably, one of the most important and effective tools that this, or any, regulatory Commission has to promote conservation is developing rates that send proper price signals to conserve and utilize resources efficiently. A pricing structure that is largely fixed, such that customers' effective prices do not properly vary with consumption, promotes the inefficient utilization of resources. Pricing structures that are weighted heavily on fixed charges are considerably inferior from a conservation and efficiency standpoint to pricing structures that require consumers to incur more cost with additional consumption.

Q. A CUSTOMER'S TOTAL ELECTRIC BILL IS COMPRISED OF A BASE RATE COMPONENT AND A LEVELIZED FUEL FACTOR. THE FUEL FACTOR CHARGE IS VOLUMETRICALLY-PRICED AND REPRESENTS A SIGNIFICANT PORTION OF A CUSTOMER'S TOTAL BILL. DOES THE VOLUMETRIC PRICING OF THIS COMPONENT ELIMINATE THE NEED FOR A PROPER PRICING SIGNAL?

A. No, certainly not. The fact that significant revenue may be collected volumetrically does not lessen the need for a reasonable rate design.

Q. NOTWITHSTANDING THE EFFICIENCY REASONS AS TO WHY REGULATION SHOULD SERVE AS A SURROGATE FOR COMPETITION, ARE THERE OTHER RELEVANT ASPECTS OF PRICING STRUCTURES IN COMPETITIVE MARKETS *VIS A VIS* THOSE OF REGULATED UTILITIES?

A. Yes. In competitive markets, consumers, by definition, have the ability to choose various suppliers of goods and services. Consumers and the market have a clear preference for volumetric pricing. Utility customers are not so fortunate in that the local utility is a monopoly. The only reason utilities are able to seek pricing structures with high fixed monthly charges is due to their monopoly status. In my opinion, this is a critical consideration in establishing utility pricing structures. Competitive markets and consumers in the United States have demanded volumetric-based prices for generations. A regulated utility's pricing structure should not be allowed to counter the collective wisdom of markets and consumers simply because of its market power.

Q. IN YOUR OPINION, SHOULD THE STRUCTURE OF ELECTRICITY RATES BE BASED ENTIRELY ON VOLUMETRIC RATES?

A. No. Consistent with economic theory as well as the accepted practice of regulators for generations, it is appropriate for electric distribution rates to include a relatively small fixed monthly customer charge. In this regard, fixed monthly charges should reflect only the direct costs to connect and maintain a customer's account. As such, customer charges should reflect only the costs of service lines, meters, meter reading, customer records and billing. Customer charges should not include any overhead costs, as these are simply the cost of doing business, nor should they include any costs of poles, lines, and transformers.

Q. DO YOU AGREE WITH MR. CONROY'S ASSERTION THAT UNDER THE CURRENT RATE STRUCTURE, SMALL VOLUME RESIDENTIAL USERS ARE BEING SUBSIDIZED BY LARGE VOLUME RESIDENTIAL CUSTOMERS?

A. No. As noted by Mr. Conroy, the Residential rate structure does not include what is known as a demand charge. Demand charges vary customer-by-customer and are based on each customer's maximum KW load (i.e., demand). It is well known that the Company's distribution system (substations, distribution lines and transformers) is designed and built to meet maximum load (demands). Generally speaking, larger customers place larger loads on the system than smaller customers. As a result, for small volume customer classes such as the Residential class, there tends to be a strong correlation between energy usage and peak load requirements. Because the Residential energy charge also reflects so-called "demand-related" costs, the current Residential energy charge reasonably reflects differences in customers' load and energy requirements and therefore, reasonably reflects cost differences between small volume and large volume Residential users. Put simply, small volume Residential customers pay less in their total electric bill than large volume users, and in turn, contribute less to the Company's cost of providing service because they tend to have lower load requirements. Similarly, large volume customers pay more in their total electric bill and tend to contribute more to the Company's cost of providing service.

Q. DO YOU AGREE WITH MR. CONROY'S ASSERTION THAT HIS PROPOSED INCREASE TO THE RESIDENTIAL FIXED MONTHLY CUSTOMER CHARGE WILL ASSIST IN PROVIDING CUSTOMER INCENTIVES TO ENGAGE IN ENERGY EFFICIENCY?

A. No. As a matter of arithmetic, Mr. Conroy's proposed increase in the Residential fixed charge will result in a lower increase to the variable energy charge. As such, Mr. Conroy's proposed increase to the Residential fixed charge will result in less incentives for energy efficiency because the variable energy charges will be lower than they otherwise would be.

Q. DO YOU AGREE WITH MR. CONROY'S ASSERTION THAT HIS PROPOSED INCREASE TO THE RESIDENTIAL FIXED MONTHLY CUSTOMER CHARGE WILL HELP STABILIZE CUSTOMER'S MONTHLY BILLS?

A. As a matter of simple arithmetic, he is correct in that higher fixed charges and lower variable charges, by definition, result in more constant (consistent) bills throughout the year regardless of usage. Indeed, if rates were designed based totally on a fixed charge basis, customer bills throughout the year would be perfectly stable; i.e., would not vary based on monthly differences in usage. Clearly, this is not an objective or goal of proper rate design. Increases in fixed monthly charges reduce the ability of consumers to control their electric bills and hamper the tried and true philosophy that the more of a good or service a consumer uses, the more they should pay for that good or service.

III. KU'S CALCULATED RESIDENTIAL CUSTOMER COSTS

Q. DOES MR. CONROY PROVIDE ANY QUANTITATIVE SUPPORT FOR HIS PROPOSED INCREASE TO THE RESIDENTIAL CUSTOMER CHARGE FROM $12.00 TO $15.00 PER MONTH?

A. Yes. Mr. Conroy refers to Company witness Andrea Fackler's class cost of service study ("CCOSS") wherein she calculated a Residential "customer-related cost" of $24.43 per month.

Q. HAVE YOU BEEN ABLE TO DETERMINE WHAT SPECIFIC COSTS MS. FACKLER INCLUDED IN HER CALCULATED $24.43 PER MONTH RESIDENTIAL CUSTOMER COST?

A. Yes. Within her CCOSS, Ms. Fackler has classified every specific rate base and expense account as demand-related, customer-related, energy-related, or a combination of the three. Ms. Fackler's "customer" classification bucket includes a significant portion of the Company's distribution plant capital costs as well as numerous general and overhead costs such as general plant and administrative and general expenses.

Q. IS IT APPROPRIATE TO CONSIDER THE COMPANY'S INVESTMENT IN DISTRIBUTION PLANT ALONG WITH OVERHEAD COSTS SUCH AS GENERAL PLANT AND ADMINISTRATIVE AND GENERAL EXPENSES IN EVALUATING FIXED MONTHLY CUSTOMER CHARGES?

A. No. In designing rates, fixed monthly customer charges should only include those costs required to connect a customer to the system and maintain a customer's account.

Q. PLEASE PROVIDE AN ITEMIZATION OF PLANT INVESTMENTS THAT MS. FACKLER INCLUDED IN HER RESIDENTIAL CUSTOMER COST ANALYSIS BUT ARE INAPPROPRIATE FOR PURPOSES OF EVALUATING FIXED MONTHLY CUSTOMER CHARGES.

A. The following table provides a list of the major gross plant and other rate base amounts Ms. Fackler inappropriately included in her Residential customer cost analysis (i.e., rate base items not required to connect and maintain a customer's account):

TABLE 1
Fackler Inappropriate Residential
Rate Base Items

Gross Plant:	
Intangible Plant	$399,372
Dist. OH Lines	$29,584,189
Dist. UG Lines	$2,666,124
Transformers	$4,280,243
General Plant	$934,189
Plant Held For Future Use	$248,632
CWIP/Dist.	$732,751
CWIP/General	$139,041
Total Gross Plant	$38,984,541
Cash Working Capital	$719,078
Materials & Supplies	$519,241
Unfunded OPEBs	$145,211

Q. PLEASE PROVIDE AN ITEMIZATION OF EXPENSES THAT MS. FACKLER INCLUDED IN HER RESIDENTIAL CUSTOMER COST ANALYSIS BUT ARE INAPPROPRIATE FOR PURPOSES OF EVALUATING FIXED MONTHLY CUSTOMER CHARGES.

A. The following table provides a list of the major operating and maintenance expenses that Ms. Fackler inappropriately included in her Residential customer cost analysis (i.e., expenses not required to connect and maintain a customer's account):

TABLE 2
Fackler Inappropriate Residential
Expense Items

O&M:	
Dist. Super. & Engineering	$41,702
OH Lines O&M	$1,037,052
UG Lines O&M	$23,141
Misc. Dist. O&M	$156,798
Cust. Accts. Supervision	$118,779
Uncollectibles (100%)	$127,819
Advertising	$75,015
Misc. Cust. Service	$10,471
Admin & General	$974,721
Total O&M	$2,565,498

Q. IS THERE ACADEMIC SUPPORT FOR NOT CONSIDERING A HOST OF INDIRECT AND OVERHEAD COSTS IN EVALUATING FIXED MONTHLY CUSTOMER CHARGES?

A. Yes. In his well-known treatise Principles of Public Utility Rates, Professor James C. Bonbright states:

> But fully-distributed cost analysts dare not avail themselves of this solution, since they are the prisoners of their own assumption that "the sum of the parts equals the whole." They are therefore under impelling pressure to fudge their cost apportionments by using the category of customers costs as a dumping ground for costs that they cannot plausibly impute to any of their other cost categories. (Second Edition, page 492)

IV. OAG CALCULATED CUSTOMER COSTS

Q. HAVE YOU CONDUCTED AN ANALYSIS OF THE APPROPRIATE LEVEL OF RESIDENTIAL CUSTOMER CHARGES FOR KU?

A. Yes. As indicated earlier, customer charges should only reflect those costs required to connect and maintain a customer's account. I have conducted a direct customer cost analysis for KU's Residential customers, which is provided in my Schedule GAW-2. In developing my Residential customer cost, I have utilized the Company's proposed capital structure, cost of debt, and requested return on equity of 10.40%.[11] As indicated in my Schedule GAW-2, I have determined that the direct Residential customer cost (at the Company's requested rate of return) is $5.38 per month. It should be noted that if the Commission authorizes a return on equity less than 10.40%, my calculated Residential customer cost will be slightly lower. For purpose of illustration, using an authorized return on equity of 9.00% (the bottom of the range approved for Annual Informational Filing purposes in KU's last base rate case, Case No. PUR-2019-00060) results in a Residential customer cost of $5.31 per month.

Q. HAS THIS COMMISSION PROVIDED GUIDANCE REGARDING HOW FIXED MONTHLY CUSTOMER CHARGES SHOULD BE DETERMINED?

A. Yes. In the Commission's August 21, 2015 Final Order in Case No. PUE-2014-00020 involving Columbia Gas of Virginia, the Commission adopted the exact same methodology that I am using in this case to determine the maximum level of the Residential customer charge.[12] In recommending that methodology, the Hearing Examiner found as follows:

> The threshold question in this case is whether any portion of the costs related to the Company's distribution mains should be recovered in the customer charge. The short answer is no. I agree with Consumer Counsel that the Company's distribution system is required to deliver natural gas to its customers, and the cost of that distribution system should be recovered in the cost of the commodity sold. In other words, I find the cost of the Company's distribution system should be recovered through its volumetric

[11] The use of KU's proposed 10.40% ROE is for illustrative purposes only. Consumer Counsel does not support this requested ROE.

[12] *Application of Columbia Gas of Virginia, Inc., For authority to increase rates and charges and to revise the terms and conditions applicable to gas service*, Case No. PUE-2014-00020, Final Order at 5-6 (Aug. 21, 2015).

> rates. This finding is consistent with the Commission's longstanding position regarding customer charges. It is a simple fact that not all residential customers are the same. Some may take gas service to operate a decorative fireplace, while others may use gas to heat their homes, hot water, swimming pools, and as fuel for cooking. The Company's intra-class subsidy argument cuts both ways. When distribution system costs are included in the fixed customer charge, low usage customers subsidize high usage customers, and when the costs are included in volumetric rates, high usage customers subsidize low usage customers. There is, however, one common understanding among consumers – the more you buy, the more you pay. There is a reason the customer charge methodology of including only the cost of connecting the customer to the distribution system, administering the account, and billing the customer, while recovering all other costs in the volumetric rate, has withstood the test of time. Given the differences among customers of the same class, it is the fairest way for the Company to recover its costs. Everyone in the same class pays the same percentage of distribution system costs in each Mcf or Dth of gas that they purchase from the Company.
>
> Accordingly, I find Consumer Counsel's recommended customer charges, which include only the costs to connect the customer to the Company's distribution system, administer the account, bill the customer, and SAVE- or ESAC-related service riser and meter replacement costs, are reasonable.[13]

Although the Commission's determination in Case No. PUE-2014-00020 relates to a natural gas utility, the concepts are identical between a natural gas utility and an electric utility.[14]

[13] *Application of Columbia Gas of Virginia, Inc., For authority to increase rates and charges and to revise the terms and conditions applicable to gas service*, Case No. PUE-2014-00020, Report on Remand of Michael D. Thomas, Hearing Examiner at 19-20 (June 30, 2015).

[14] In the Columbia Gas of Virginia case, the issue concerned the Company's treatment of distribution mains (pipes) while KU's costs relate to distribution poles, lines, and transformers. The rate design concepts between natural gas distribution mains and electric utility distribution poles, lines, and transformers are identical; i.e., Columbia had classified and allocated a portion of mains as customer-related conceptually the same as KU has classified distribution poles, lines, and transformers in this case.

Q. DID THE COMMISSION'S ORDER IN CASE NO. PUE-2014-00020 ESTABLISH A BRIGHT-LINE RULE FOR DETERMINING FIXED CUSTOMER CHARGES?

A. No. The Commission's Order in Case No. PUE-2014-00020 specifically stated that it was not approving a "bright-line rule." Rather, the Commission's findings in that case were based on the specific facts as presented in that proceeding and the Commission noted that it has historically exercised discretion in determining the appropriate level of customer charges based on the facts and circumstances of each case.

Q. IN YOUR OPINION, ARE THERE ANY FACTS OR CIRCUMSTANCES IN THIS CASE THAT SHOULD CAUSE THE COMMISSION TO DEVIATE FROM ITS PRECEDENT IN CASE NO. PUE-2014-00020?

A. No. The facts and circumstances in this case mirror those in the Columbia Gas of Virginia case. Indeed, the approaches used and arguments made by Ms. Fackler and Mr. Conroy are identical to those made by Columbia Gas of Virginia's witnesses that were rejected.

Q. HOW DOES KU'S CURRENT RESIDENTIAL CUSTOMER CHARGE COMPARE TO THE OTHER INVESTOR-OWNED ELECTRIC UTILITIES IN THE COMMONWEALTH?

A. Appalachian Power Company's current Residential customer charge is \$7.96 per month while Dominion's Residential customer charge is \$6.58 per month.[15]

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[15] Dominion's Residential customer charge will be increased \$1.00 to \$7.58 per month effective January 1, 2024, per the Final Order in Case No. PUR-2021-00058.

V. OAG RECOMMENDED RESIDENTIAL CUSTOMER CHARGE

Q. WHAT IS YOUR RECOMMENDATION REGARDING FIXED MONTHLY CUSTOMER CHARGES FOR KU'S RESIDENTIAL CUSTOMERS?

A. My analysis of direct Residential customer costs produces a cost of no more than $5.38 per month. Although my cost analysis indicates that a reduction to the fixed monthly charge may be warranted, I recommend that the current Residential customer charge of $12.00 per month be maintained given that the Commission has previously authorized this level.

Q. DOES THIS COMPLETE YOUR TESTIMONY?

A. Yes.

Schedule GAW-1

BACKGROUND & EXPERIENCE PROFILE
GLENN A. WATKINS
PRESIDENT/SENIOR ECONOMIST
TECHNICAL ASSOCIATES, INC.

EDUCATION

1982 - 1988	M.B.A., Virginia Commonwealth University, Richmond, Virginia
1980 - 1982	B.S., Economics; Virginia Commonwealth University
1976 - 1980	A.A., Economics; Richard Bland College of The College of William and Mary, Petersburg, Virginia

POSITIONS

Jan. 2017-Present	President/Senior Economist, Technical Associates, Inc.
Mar. 1993-Dec. 2016	Vice President/Senior Economist, Technical Associates, Inc. (Mar. 1993-June 1995 Traded as C. W. Amos of Virginia)
Apr. 1990-Mar. 1993	Principal/Senior Economist, Technical Associates, Inc.
Aug. 1987-Apr. 1990	Staff Economist, Technical Associates, Inc., Richmond, Virginia
Feb. 1987-Aug. 1987	Economist, Old Dominion Electric Cooperative, Richmond, Virginia
May 1984-Jan. 1987	Staff Economist, Technical Associates, Inc.
May 1982-May 1984	Economic Analyst, Technical Associates, Inc.
Sep. 1980-May 1982	Research Assistant, Technical Associates, Inc.

EXPERIENCE

I. Public Utility Regulation

A. Costing Studies -- Conducted, and presented as expert testimony, numerous embedded and marginal cost of service studies. Cost studies have been conducted for electric, gas, telecommunications, water, and wastewater utilities. Analyses and issues have included the evaluation and development of alternative cost allocation methods with particular emphasis on ratemaking implications of distribution plant classification and capacity cost allocation methodologies. Distribution plant classifications have been conducted using the minimum system and zero-intercept methods. Capacity cost allocations have been evaluated using virtually every recognized method of allocating demand related costs (e.g., single and multiple coincident peaks, non-coincident peaks, probability of loss of load, average and excess, and peak and average).

Embedded and marginal cost studies have been analyzed with respect to the seasonal and diurnal distribution of system energy and demand costs, as well as cost effective approaches to incorporating energy and demand losses for rate design purposes. Economic dispatch models have been evaluated to determine long range capacity requirements as well as system marginal energy costs for ratemaking purposes.

B. Rate Design Studies -- Analyzed, designed and provided expert testimony relating to rate structures for all retail rate classes, employing embedded and marginal cost studies. These rate structures have included flat rates, declining block rates, inverted block rates, hours use of demand blocking, lighting rates, and interruptible rates. Economic development and special industrial rates have been developed in recognition of the competitive environment for specific customers. Assessed alternative time differentiated rates with diurnal and seasonal pricing structures. Applied Ramsey (Inverse Elasticity) Pricing to marginal costs in order to adjust for embedded revenue requirement constraints.

C. Forecasting and System Profile Studies -- Development of long range energy (Kwh or Mcf) and demand forecasts for rural electric cooperatives and investor owned utilities. Analysis of electric plant operating characteristics for the determination of the most efficient dispatch of generating units on a system-wide basis. Factors analyzed include system load requirements, unit generating capacities, planned and unplanned outages, marginal energy costs, long term purchased capacity and energy costs, and short term power interchange agreements.

D. Cost of Capital Studies -- Analyzed and provided expert testimony on the costs of capital and proper capital structures for ratemaking purposes, for electric, gas, telephone, water, and wastewater utilities. Costs of capital have been applied to both actual and hypothetical capital structures. Cost of equity studies have employed comparable earnings, DCF, and CAPM analyses. Econometric analyses of adjustments required to electric utilities cost of equity due to the reduced risks of completing and placing new nuclear generating units into service.

E. Accounting Studies -- Performed and provided expert testimony for numerous accounting studies relating to revenue requirements and cost of service. Assignments have included original cost studies, cost of reproduction new studies, depreciation studies, lead-lag studies, Weather normalization studies, merger and acquisition issues and other rate base and operating income adjustments.

II. Transportation Regulation

A. Oil and Products Pipelines -- Conducted cost of service studies utilizing embedded costs, I.C.C. Valuation, and trended original cost. Development of computer models for cost of service studies utilizing the "Williams" (FERC 154-B) methodology. Performed alternative tariff designs, and dismantlement and restoration studies.

B. Railroads -- Analyses of costing studies using both embedded and marginal cost methodologies. Analyses of market dominance and cross-subsidization, including the implementation of differential pricing and inverse elasticity for various railroad commodities. Analyses of capital and operation costs required to operate "stand alone" railroads. Conducted cost of capital and revenue adequacy studies of railroads.

III. Insurance Studies

Conducted and presented expert testimony relating to market structure, performance, and profitability by line and sub-line of business within specific geographic areas, e.g. by state. These studies have included the determination of rates of return on Statutory Surplus and GAAP Equity by line - by state using the NAIC methodology, and comparison of individual insurance company performance vis a vis industry Country-Wide performance.

Conducted and presented expert testimony relating to rate regulation of workers' compensation, automobile, and professional malpractice insurance. These studies have included the determination of a proper profit and contingency factor utilizing an internal rate of return methodology, the development of a fair investment income rate, capital structure, cost of capital.

Other insurance studies have included testimony before the Virginia Legislature regarding proper regulatory structure of Credit Life and P&C insurance; the effects on competition and prices resulting from proposed insurance company mergers, maximum and minimum expense multiplier limits, determination of specific class code rate increase limits (swing limits); and investigation of the reasonableness of NCCI's administrative assigned risk plan and pool expenses.

GLENN A. WATKINS

IV. Anti-Trust and Commercial Business Damage Litigation

Analyses of alleged claims of attempts to monopolize, predatory pricing, unfair trade practices and economic losses. Assignments have involved definitions of relevant market areas(geographic and product) and performance of that market, the pricing and cost allocation practices of manufacturers, and the economic performance of manufacturers' distributors.

Performed and provided expert testimony relating to market impacts involving automobile and truck dealerships, incremental profitability, the present value of damages, diminution in value of business, market and dealer performance, future sales potential, optimal inventory levels, fair allocation of products, financial performance; and business valuations.

MEMBERSHIPS AND CERTIFICATIONS

Member, Association of Energy Engineers (1998)
Certified Rate of Return Analyst, Society of Utility and Regulatory Financial Analysts (1992)
Member, American Water Works Association
National Association of Business Economists
Richmond Association of Business Economists
National Economics Honor Society

Schedule GAW-2

KENTUCKY UTILITIES COMPANY D/B/A OLD DOMINION POWER COMPANY

Residential Customer Cost Analysis @ KU Proposed Cost of Capital

	Total Jurisdictional	Allocation Factor		Residential
Gross Plant				
369 Services	$6,306,473 1/	77.88%	C02	$4,911,314
370 Meters	$3,643,025 1/	60.08%	C03	$2,188,738
Total Gross Plant	$9,949,498			$7,100,052
Depreciation Reserve				
Services	-$4,513,275 1/	77.88%	C02	-$3,514,819
Meters	-$2,824,753 1/	60.08%	C03	-$1,697,119
Total Depreciation Reserve	-$7,338,028			-$5,211,938
Total Net Plant	$2,611,470			$1,888,115
Operation & Maintenance Expenses				
586 Dist Oper - Meter	$430,473 2/	60.08%	C03	$258,629
597 Maintenance of Meters	$0 2/	60.08%	C03	$0
902 Meter Reading	$461,919 2/	61.17%	CUST05	$282,562
903 Customer Records	$1,017,647 2/	61.17%	CUST05	$622,508
Total O & M Expenses	$1,910,039			$1,163,699
Depreciation Expense				
Services	$102,795 3/	77.88%	C02	$80,054
Meters	$145,461 3/	60.08%	C03	$87,393
Total Depreciation Expense	$248,256			$167,447
Revenue Requirement				
Interest				$34,845 4/
Equity return				$105,634 4/
State Income Taxes @ 6.0%				$8,535
Federal Income Tax @ 21.0%				$28,080
Revenue For Return				$177,093
O & M Expenses				$1,163,699
Depreciation Expense				$167,447
Subtotal Customer Revenue Requirement				$1,508,240
Uncollectible				$4,368 5/
Total Revenue Requirement				$1,512,608
Number of Bills				281,132 6/
TOTAL MONTHLY CUSTOMER COST				$5.38

1/ Per Jurisdictional Separation Study, Tab: PIS-YE, rows 214-216.

2/ Per Schedule 40C (Class Cost of Service Study, Tab: Func Assign.

3/ Per Jurisdictional Separation Study, Tab: PISDATA, rows 632 & 636.

4/ KU Proposed Cost of Capital:

	Percent	Cost	Wgtd. Cost
LT Debt	44.181%	4.13%	1.8256%
ST Debt	2.024%	0.98%	0.0199%
Equity	53.795%	10.40%	5.5947%
Total	100.000%		7.44%

5/ Total Juris:[Uncollect./(Billed Rev.+Curtailable Credit Rev.+Unbilled Rev.+Accrued Rev.)] x Rev. Rqmt.

6/ Per Schedule 40C (Class Cost of Service Study), Tab: Allocation.